

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1, 22 and 26 are currently being amended.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Claims Are Patentable

Claims 1, 2, 4, 5, 6, 9, 10, 16-19 and 22-30 are rejected under 35 U.S.C. 103(a) as obvious over Werner (US Patent No. 3,844,777 of record) in view of Mandigo et al. (USP 3,966,506), and over Werner in view of Toh et al. ("An investigation of the native oxide of aluminum alloy 7475-T7651 using XPS, AES, TEM, EELS, GDOES and RBS", of record). Claim 3 is further rejected under 35 U.S.C. 103(a) as being unpatentable over Werner and Toh et al. or Werner and Mandigo, and further in view of McMillan et al. (US Patent No. 3,986,897). Claims 7, 11, 12, 13, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner and Toh et al. or Werner and Mandigo and further in view of Swaney (US Patent No. 3,747,199, of record). Claims 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner and Toh et al. or Werner and Mandigo, and further in view of Knepper et al. (USP 5,618,357).

The rejections are respectfully submitted to be improper, because the Office Action does not establish a *prima facie* case of obviousness. Specifically, the action does not provide motivation to combine the references in the manner suggested. Applicants incorporate their comments in their reply of March 8, 2010, where it is noted that Werner teaches that oxide layer thicknesses must be reduced from native oxide thicknesses for successful brazing.

In response to the Applicants' arguments, the Office Action notes:

... this is not persuasive because the combination proposed above [Werner and Mandigo] incorporates the annealing process [of Mandigo] prior to the cleaning (i.e. making the oxide workably thin) and joining operation [of Werner] and does not increase the oxide layer of the workpiece after or during the cleaning and brazing operation (which would be undesirable in the process of Werner).

If that is the case, then Applicant would respectfully submit that the combination does not teach the claimed subject matter. Rather, the combination as clarified in the response to arguments actually avoids the invention, by first (according to the Office Action) creating a thicker oxide layer and then removing it again prior to brazing. In contrast, for example, claim 1 recites that the soldering workpiece (*i.e.* the piece to actually be soldered) has a (hydr)oxide layer of at least 25 nm.

A similar observation can be made with regard to the combination of Werner and Toh: the only way to get Werner to work with Toh's material is to assume that Werner cleans off the thicker than native oxide layer recited by the instant claims.

Applicants respectfully submit that they have provided a non-obvious invention. Conventional wisdom, as reflected in Werner, teaches that oxide layers are detrimental to brazing, and that their detrimental effects must be avoided by reducing the oxide layer thickness. Contrary to this belief, however, Applicants teach that there is a thicker range of oxide layer that loses its ability to thermally deform without cracking and exposing the underlying workpiece. Thus, Applicants' claims counterintuitively recite a workpiece with a thicker oxide layer. The Office Action has presented no credible reason to arrive at this unexpected arrangement without employing hindsight.

Nevertheless, to advance prosecution and without disclaimer, prejudice or estoppel against the reintroduction of claims of unamended scope, the Applicants have amended the claims to recite a solder plating layer on the aluminum workpiece, according to, *e.g.*, the embodiment of Fig. 2 described beginning at page 10, line 27 of the instant application. It is

respectfully submitted that the references of record do not teach such an embodiment together with the other elements of the independent claims.

Applicants thus respectfully request that the rejections be withdrawn.

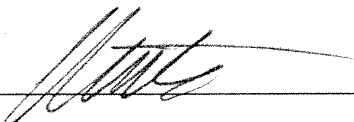
The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 2010-08-06

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